

CLAIMS

What is claimed is:

1. An open circuit detection apparatus for detecting whether a connection is closed
5 between a local node and a remote node having a known impedance, the
 apparatus comprising:
 a ping source connected to the local node, said ping source further comprising
 an output for transmitting an address unique to the remote node; and
 an input for sensing the impedance of the remote node;
10 a test circuit connected to the remote node, said test circuit further comprising
 an address decoder for receiving said address from said output, said address
 decoder having a unique address;
 a control signal, said address decoder asserting said control signal upon said
 address matching said unique address of said address decoder; and
15 an impedance varying device being responsive to said control signal, said
 impedance varying device effecting a change in the impedance of the
 remote node; and
 said change in the impedance of the remote node being sensed by said input of said ping
 source.
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2. The apparatus of claim 1 wherein the address decoder is adapted to receive an n
 number of bits.

3. The apparatus of claim 2 wherein the impedance varying device is a transistor.
4. A method for determining whether a connection is closed between a local node and a remote node, the method comprising:
 - 5 transmitting a unique address from the local node, through the connection, to the remote node;
 - changing the impedance of the remote node in response to said unique address being received at the remote node;
 - sensing the impedance change of the remote node and determining therefrom that the connection is closed.
5. The method of claim 4 further comprising sensing an open impedance of the remote node and determining therefrom that the connection is open.
6. The method of claim 5 wherein said unique address is comprised of n -bits.
7. The method of claim 6 wherein said step of transmitting said unique address occurs when the connection is free from other communication.
8. The method of claim 7 wherein said step of determining the connection is closed further comprises a comparison between a voltage of the local node and a reference voltage.

9. The method of claim 8 wherein said step of determining the connection is open further comprises a comparison between said voltage of the local node and said reference voltage.

10. In an open circuit detection apparatus for detecting whether a connection is closed between a local node and a remote node, the remote node having a known impedance, the apparatus having a ping source connected to the local node, the ping source having an output for transmitting an address unique to the remote node and an input for sensing the impedance of the remote node, a test circuit for effecting a change in the known impedance of the remote node, the test circuit comprising:

an address decoder for receiving the address from the output, said address controller

having a unique address;

10 a control signal, said address decoder asserting said control signal upon the address matching said unique address of said address decoder; and

an impedance varying device being responsive to said control signal, said impedance varying device effecting a change in the impedance of the remote node, said change indicating to the input that the connection is closed.

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11. The apparatus of claim 10 wherein said address decoder is adapted to receive an n number of bits.

12. The apparatus of claim 11 wherein said impedance varying device is a transistor.

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